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Evaluation of Psychiatric Complaints and Diagnoses Associated with Skin Diseases: A Cross-Sectional Study

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ABSTRACT

Objective: It's known that skin diseases can affect not only physical health but also cause social and psychological problems. This study aimed to determine psychiatric follow-up rates and the frequency of psychiatric complaints in individuals with dermatologic diseases. **Materials and Methods:** The study included 791 patients who visited a dermatology outpatient clinic between July 2022 and January 2023. Participants completed a sociodemographic data form and a screening list of common psychiatric complaints, both prepared by the researchers. **Results:** A total of 791 patients were included in the study (496 females, 63.7%; 295 males, 37.3%). The most common dermatologic diagnoses were acneiform (27.9%), inflammatory (19.2%), and infectious (17.2%) dermatoses. A psychiatric follow-up history was reported by 11.8% (n=93) of the patients, and 14.2% (n=112) reported psychiatric medication use. The most frequently reported psychiatric complaint was depressive mood (50%), followed by anxiety symptoms and obsessive-compulsive complaints (30%). **Conclusion:** Various studies have shown that psychiatric problems may play a role in the onset or exacerbation of many skin diseases. The finding that half of the dermatology patients reported a depressive mood suggests that psychiatric evaluation may positively affect treatment success and improve patients' quality of life.

Keywords: Dermatologic Diseases, Psychiatric Complaints, Psychiatric Comorbidity.

Cilt Hastalıklarıyla İlişkili Psikiyatrik Şikâyet ve Tanıların Değerlendirilmesi: Kesitsel Bir Çalışma

ÖZ

Amaç: Deri hastalıklarının fiziksel sağlık üzerindeki etkilerinin yanı sıra sosyal ve psikolojik sorunlara da yol açabileceği bilinmektedir. Bu çalışmada, dermatolojik hastalığı olan bireylerde psikiyatrik takip oranlarını ve psikiyatrik şikayetlerin sıklığını belirlemek amaçlanmıştır. **Gereç ve Yöntem:** Çalışma, Temmuz 2022 ile Ocak 2023 tarihleri arasında bir dermatoloji polikliniğine başvuran 791 hastayı içermektedir. Katılımcılara, araştırmacılar tarafından hazırlanan sosyodemografik bilgi formu ve yaygın psikiyatrik şikayet kategorilerinin bulunduğu bir tarama listesi uygulanmıştır. **Bulgular:** Toplamda 791 hasta çalışmaya dahil edilmiştir (496 kadın, %63,7; 295 erkek, %37,3). En yaygın dermatolojik tanılar akneiform (%27,9), enflamatuar (%19,2) ve enfeksiyöz (%17,2) dermatozlar olmuştur. Psikiyatrik takip öyküsü bulunan hasta oranı %11,8 (n=93) ve psikiyatrik ilaç kullanım oranı %14,2 (n=112) olarak bulunmuştur. En sık bildirilen psikiyatrik şikayet depresif ruh hali (%50) olup, bunu kaygı belirtileri ve obsesif-kompulsif şikayetler (%30) takip etmiştir. **Sonuç:** Çeşitli çalışmalar, psikiyatrik problemlerin birçok deri hastalığının başlangıcında veya alevlenmesinde rol oynayabileceğini göstermiştir. Dermatoloji hastalarının yarısında depresif ruh hali görülmesi, psikiyatrik değerlendirmenin tedavi başarısını ve hastaların yaşam kalitesini olumlu yönde etkileyebileceğini göstermektedir.

Anahtar Kelimeler: Dermatolojik Hastalıklar, Psikiyatrik Şikayetler, Psikiyatrik Komorbidite.

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INTRODUCTION

The skin is an organ that largely determines external appearance and plays an important role in social and interactive relations. Therefore, in addition to affecting the physical health of patients, dermatologic diseases can also lead to social and psychological problems and impact self-perception and relationships with the environment (Bilgiç & Bilgiç, 2012). On the other hand, psychiatric factors are thought to influence the onset and exacerbation of many dermatologic diseases. The relationship between the skin and the central nervous system (CNS) dates back to the embryologic development of human beings. Both the CNS and the epidermis originate from the ectoderm. There is strong communication between the skin and CNS, mediated through afferent and efferent pathways. The same hormones, neurotransmitters, and neuropeptides function in the skin and CNS, and studies suggest that stress may cause and exacerbate skin diseases by affecting hormone and neurotransmitter levels (Salzer & Schallreuter, 1995; Millington & Palmer, 2023; Peters, 2016).

The term psychodermatologic diseases has been used historically and includes conditions that are primarily psychiatric but present with skin symptoms, such as delusional parasitosis, artificial dermatitis, trichotillomania, onychotillomania, body dysmorphic disorder, neurotic excoriations, and psychogenic pruritus. Dermatologic diseases that may lead to psychiatric disorders include alopecia areata, vitiligo, chronic eczema, and rhinophyma. Additionally, psoriasis, acne, hyperhidrosis, atopic dermatitis, urticaria, herpes simplex virus infection, seborrheic dermatitis, aphthae, and rosacea are among stress-induced or exacerbated skin diseases (Koo & Lebwohl, 2001). Furthermore, some dermatological treatments, such as corticosteroids, can induce psychiatric symptoms, while psychiatric medications, such as lithium and lamotrigine, can affect the skin (Picardi et al., 2000).

When evaluating skin and psychiatric diseases together, age, gender, and personality traits of patients play important roles. Studies on acne in young people have emphasized that acne, which develops during a period when social and emotional relationships gain importance, significantly impacts interpersonal relationships, self-perception, and daily performance (Khan et al., 2001). Women appear to be more severely affected than men. For instance, women with androgenetic alopecia exhibit twice as many psychosocial symptoms, including severe depression and loss of self-confidence, compared to their peers (Cash et al., 1993). Similarly, a 2020 meta-analysis on vitiligo cases indicated that female patients have a higher incidence of anxiety disorders than male patients (Kussainova et al., 2020). Regarding personality traits, individuals with borderline personality disorder frequently experience fluctuating moods, intense anxiety, and a higher incidence of self-mutilation behaviours, artificial dermatoses, and acne excoriation (Harth et al., 2004).

The literature frequently demonstrates the relationship between various skin diseases and stigmatization, depression, and anxiety levels, as well as the negative impact of psychiatric conditions on treatment and quality of life (Hughes et al., 2022; Pärna et al., 2015; Picardi et al., 2003). Contributing to the knowledge of this comorbidity's frequency is crucial to increasing dermatologists' awareness and supporting the implementation of appropriate interventions for affected patients. Therefore, our study aims to determine both the frequency and types of psychiatric symptoms in individuals presenting to dermatology clinics and the psychiatric follow-up rates of these individuals.

MATERIALS AND METHODS

The study population included 791 patients aged 15-85 years who applied to the dermatology outpatient clinic of Balıkesir Atatürk City Hospital between July 2022 and January 2023. Patients were given a sociodemographic and clinical information form that required from them to indicate their sociodemographic characteristics such as gender, age, education level, and marital status.

These survey forms were prepared by the researchers by categorizing common psychiatric complaints in the society (depressive complaints, anxiety complaints, symptoms of obsessive-compulsive disorder, psychotic symptoms, sleep, appetite and somatic complaints, memory impairment and attention problems, and other psychiatric complaints).

The design of the research study

This was a cross-sectional research study. Literate patients aged between 15-85 years without mental retardation who received the diagnosis of any dermatologic disease were included in the study.

Sociodemographic-clinical information form

This form prepared by the researchers interrogated gender, age, education level, marital status and psychiatric complaints (if any) of the participants; if so, whether they have referred to a psychiatric clinic for these complaints and used any psychiatric medication. This form was developed by the authors based on a comprehensive review of relevant literature and clinical experience. In order to make the psychiatric complaints interrogated in this form easy for the patients to understand, the replies given were categorized under seven subheadings as follows:

Depressive complaints (depressed mood, decreased interest and desire, lack of pleasure, suicidal thoughts, unhappiness); anxiety symptoms (constant anxiety and uneasiness, panic attacks, restlessness, inability to relax, concerns about the future; psychotic symptoms (delusions and hallucinations); attention problems and memory impairment; obsessive-compulsive symptoms (presence of obsessions/compulsions); problems in vegetative function related to sleep, appetite, sexuality)

and other uncategorized complaints defined by the individual.

Statistical analysis

The data were analysed using SPSS (Statistical Package for Social Sciences for Windows v.26.0, SPSS Inc. Chicago, IL). Descriptive statistics were presented as mean (±) standard deviation, frequency distribution and percentages.

Ethical approval

Approval for this study was obtained from Balıkesir University Non-Interventional Clinical Research Ethics Committee with the decision number 2022/75 dated 28/06/2022. The purpose of the study was explained to the participants in detail and patients who agreed to participate in the study and signed the informed consent forms were enrolled in the study.

RESULTS

Demographic characteristics and diagnoses of patients

Sociodemographic data of study population (mean age: 34.3±14.3 years) consisting of 295 (37.3%) male, and 496 (62.7%) patients were evaluated. The patients were married (n:389; 49.2%), single/divorced/widowed (n: 402:50.8%), educated for ≤ 12 years (n:227; 28.7%), and university graduates (n: 564;71.3%)

Diagnostic distribution of skin diseases of the study population

The patients in the study group received the diagnosis of inflammatory dermatoses (n:152; 19.2%) (psoriasis, pityriasis rosea, seborrheic dermatitis, recurrent oral aphthae, actinic lichen planus, erythema nodosum, and hidradenitis suppurativa), eczematous and allergic dermatoses (n:78; 9.9%) (atopic dermatitis, allergic contact dermatitis, chronic urticaria, artifact dermatitis, dermatitis, urticaria, angioedema, dyshidrosis and drug sensitivity syndrome: DRESS), acneiform dermatoses (n:221; 27. 9%) (acne vulgaris, rosacea), diseases of hair, nail and skin appendages (n:88; 11.1%) (alopesia areata, telogen effluvium, nail disorders, hyperhidrosis, androgenic alopecia, eccrine hydradenitis, epidermal cyst, miliaria, mucocele, epidermal thickening, trichotillomania), infectious dermatoses (n:136;17.2%) (bacterial, viral, parasitic and fungal diseases), pigmentation disorders (n:40; 5.1%) (vitiligo, nevi, melanin hyperpigmentation and melasma), neoplastic conditions (n:7 ;0.9%) (basal cell carcinoma, squamous cell carcinoma, myelofibrosis) , bullous diseases (n:5 ;0. 6%) (bullous pemphigoid, pemphigus), acute transient conditions (n:64; 8.1%), (erythema multiforme, pruritus, insect bites, drug eruptions) and chronic diseases (dermatitis herpetiformis, pernio, keloid, bier spot callus, livedo reticularis, neurotic excoriation, haemangiomas, amyloidosis) (Table 1).

Patients with dermatologic diseases had a history of psychiatric follow-up (93/791; 11.8%), and psychiatric drug use (112/ 791; 14.2%) (Table 2). The distribution of the main psychiatric complaints and psychiatric disease categories of the study participants is shown in Table 3 and Table 4.

Table 1. Diagnostic distribution of skin diseases.

Diagnostic Categories	n	%
Acneiform Dermatoses	221	27.9
Inflammatory Dermatoses	152	19.2
Infectious Dermatoses	136	17.2
Diseases of Hair, Nail, and Skin Appendages	88	11.1
Eczematous and Allergic Dermatoses	78	9.9
Acute transient /Chronic Conditions	64	8.1
Pigmentation Disorders	40	5.1
Neoplastic Conditions	7	0.9
Bullous Diseases	5	0.6

Table 2. Diagnostic distribution of patients with a history of psychiatric follow-up, and medication use.

		Psychiatric follow-up n (%)	Psychiatric drug use n (%)
Inflammatory Dermatoses	Yes	21 (13.8)	18 (11.8)
	No	131(86.2)	134 (88.2)
Eczematous and Allergic Dermatoses	Yes	17 (21.8)	19 (24.45)
	No	61(78.2)	59 (75.6)
Acneiform Dermatoses	Yes	13(5.9)	15 (6.8)
	No	208 (94.1)	206 (93.2)
Diseases of Hair, Nail, and Skin Appendages	Yes	9 (10.2)	7 (8)
	No	79(89.8)	81 (92)
Infectious Dermatoses	Yes	11(8.1)	11 (8.1)
	No	125 (91.9)	125 (91.9)
Pigmentation Disorders	Yes	1(2.5)	5 (12.5)
	No	39 (97.8)	35 (87.5)
Neoplastic Conditions	Yes	2 (28.6)	2 (28.6)
	No	5 (71.4)	5 (71.4)
Bullous Diseases	Yes	3 (60)	3 (60)
	No	2 (40)	2 (40)
Acute transient /Chronic Conditions	Yes	16 (25)	32 (50)
	No	48 (75)	32 (50)

Table 3. Distribution of basic psychiatric complaints of the study participants.

Psychiatric complaints related to	n	%
Depression	397	50.2
Anxiety	242	30.6
Obsessive compulsive disorder	237	30.0
Attention deficit/Forgetfulness	207	26.2
Vegetative disorder	138	17.4
Psychotic disorders	18	2.3

Table 4: Distribution of basic psychiatric disease categories.

Diagnostic Categories	Psychiatric disease categories					
	Depression n (%)	Anxiety n (%)	OCD n (%)	Psychosis n (%)	Attention deficit n (%)	Vegetative disorder n (%)
Inflammatory Dermatoses	82(53.1)	49(32.2)	53(34.9)	5(3.3)	39(25.7)	24(15.8)
Eczematous and Allergic Dermatoses	39 (50)	25(32.1)	25(32.1)	2(2.6)	18(23.1)	14(17.9)
Acneiform Dermatoses	116(52.5)	60(27.1)	72(32.6)	3(1.4)	61(27.6)	38(17.2)
Hair, Nail, and Appendage Diseases	47(53.4)	28(31.8)	24(27.3)	3(3.4)	32(36.4)	18(20.5)
Infectious Dermatoses	63(46.3)	41(30.1)	40(29.4)	2(1.5)	35(25.7)	26(19.1)
Pigmentation Disorders	20(50)	12(30.0)	12(30)	1(2.5)	10(25)	4(10)
Neoplastic Conditions	0	2(28.6)	0	0	0	1(14.3)
Bullous Diseases	2(40)	1(20)	0	0	0(20)	3(60)
Acute-Transient/Chronic Conditions	28(43.3)	24(37.5)	11(17.2)	1(3.1)	11(17.2)	10(15.6)

OCD: Obsessive-compulsive disorder

DISCUSSION

In the study, in which we examined the frequency of psychiatric complaints and patient follow-up rates, we determined that 12% of patients had been followed up for psychiatric disorders, and 14% used a psychiatric drug. In addition, some patients who were not diagnosed or followed up for any psychiatric illness still reported symptoms of depression (50%), anxiety (30%), and obsessive-compulsive disorder (30%).

Psychodermatology uses a multidisciplinary approach that investigates the relationship between the skin and the mind from a common perspective. As it is a specialized field, it can be difficult to make an accurate diagnosis and provide effective treatment for these patients. Studies have shown that roughly one-fifth of psychiatrists and dermatologists have knowledge about this discipline and awareness in diagnosing and treating these patients (Jafferany et al., 2010a; Jafferany et al., 2010b). Our study highlights the prevalence of psychiatric symptoms in patients with dermatologic diagnoses and underscores the potential value of incorporating psychiatric evaluation into dermatology practice.

Previous research studies demonstrated that more than half of the patients with skin diseases (51%) need psychotherapeutic support, 28% are willing to undergo psychotherapy, and 38% have received psychiatric support (Fritzsche et al., 2001). A study involving 2,579 individuals with skin disease indicated that a psychiatric diagnosis accompanied the dermatologic disease in about a quarter of the patients (25.2%). In their study, Picardi et al. (2000) found a higher prevalence of psychiatric disorders in women and widowed individuals. In addition, health-related quality of life was also found to be a strong predictor of psychiatric morbidity. Hughes et al. (1983) reported that 30% of dermatology outpatients and 60% of inpatients scored above the threshold on the General Health Questionnaire-30 (GHQ-30), a scale developed to screen for psychiatric symptoms. These findings suggest that dermatology outpatients have a higher prevalence of psychiatric disorders compared to the general population, and dermatology inpatients have a higher prevalence compared to inpatients of general medicine. In a study conducted by Aktan et al. (1998) with dermatology patients in Turkey, the prevalence of psychiatric morbidity was 41% according to the General Health Questionnaire-12 (GHQ-12) and 33.4% according to the SCID-I guide (Structured Clinical Interview).

Wessely and Lewis (1989) examined 160 adult patients who applied to a dermatology clinic and evaluated their psychiatric comorbidities using both

questionnaire forms and one-to-one interviews. The prevalence rates were determined as 42.7% based on GHQ-12 and 40.2% according to the Clinical Interview Scale (CIS). It was thought that 75% of psychiatric comorbidities were directly, while 20% were coincidentally, associated with a skin disease. Attah Johnson and Mostaghimi (1995) examined 132 consecutive patients at a dermatology clinic in Papua New Guinea. Patients were screened using the Harding Self-Assessment Questionnaire, and those scoring above the threshold were evaluated by a psychiatrist. Higher rates of psychiatric comorbidities were reported in female (71.6%) and male (69.2%) patients with skin diseases, most commonly anxiety disorder or depression.

In our study, when all diseases of our study population were evaluated, approximately 12% of the patients were followed up with a psychiatric diagnosis. More than half of our patients with skin diseases had depressive mood, and one-third had anxiety and obsessive-compulsive complaints. The lower prevalence of psychiatric comorbidities in our study compared to the literature may reflect limited psychiatric referral among patients with such complaints. These findings indicate a potential benefit of increasing awareness and screening for psychiatric symptoms among dermatology patients.

In our study, the most frequently observed skin diseases among patients followed up with a psychiatric diagnosis were bullous diseases (60%), neoplastic conditions (28.6%), acute-transient/chronic conditions (25%), and eczematous/allergic dermatoses (21.8%), in order of decreasing frequency. However, the small number of patients with bullous and neoplastic diseases (n=12) restricts generalization of our results to the entire patient population. The finding that depressive mood was present in approximately half of the patients across all disease categories (except neoplastic conditions) suggests a potential benefit of psychiatric evaluation in improving patient care.

In a meta-analysis of prevalence rates of depression and/or depressive symptoms in general outpatient clinics, the highest prevalence estimates were reported in otolaryngology (53.0%) followed by dermatology clinics (39.0%) (Wang et al., 2017). Kökçam and Dilek (2010) examined psychiatric consultations requested for dermatology inpatients and found that 91.7% of patients had a psychiatric pathology, most commonly depression (48.1%) and generalized anxiety disorder (31.4%).

Systemic inflammation is prominent in skin diseases, especially in association with inflammatory dermatoses and depression. Increased levels of proinflammatory cytokines such as TNF-α, IL-6, and IL-17 have been reported in both psoriasis and depression. Studies with TNF-α antagonists (adalimumab, etanercept, infliximab) have shown symptomatic improvement in both psoriasis and depression (Kannan et al., 2013).

A meta-analysis of 42 studies found a significant association between acne vulgaris and depression and anxiety. Subgroup analyses showed that age, work environment, and geographical region moderated this association. The authors supported aggressive treatment of acne and psychiatric screening due to the increased risk of depression and anxiety (Samuels et al., 2020). Meta-analyses of 28 studies on depression and 12 studies on anxiety reported prevalence rates of depression (21%) and anxiety (12%) among patients with hidradenitis suppurativa (Jalenques et al., 2020). Although depression and anxiety are frequently reported in skin diseases, relatively few studies have explored obsessive-compulsive disorders in dermatologic contexts. An increased risk of developing autoimmune skin diseases has been reported in patients with obsessive-compulsive disorder compared to healthy controls (Chou et al., 2022). Individuals with atopic dermatitis were also found to be more likely to be diagnosed with OCD compared to a matched control group without AD, and this association remained significant even after adjusting for age, gender, race/ethnicity, income, smoking, and depression (Chen et al., 2023). Moreover, patients with OCD-related conditions such as trichotillomania, body dysmorphic disorder, and skin picking disorder frequently consult dermatologists, highlighting the potential importance of screening for these psychiatric comorbidities in dermatology practice.

When the relationship between psychiatric complaints and skin diseases is evaluated, certain clinical features stand out. High psychiatric comorbidity rates have been reported in patients with acne, pruritus, urticaria, alopecia, herpesvirus infections, and in individuals without objective skin symptoms (Picardi et al., 2000). In a 2015 study, skin disease restricting physical activity was identified as a risk factor for psychiatric disorders (Yildiz Miniksar, 2015). Chronicity of skin diseases also imposes a psychiatric burden on patients. For instance, chronic spontaneous urticaria has been associated with anxiety and depression at rates of 10–31% and 7–29%, respectively (Kolkhir et al., 2024). Additionally, psychiatric comorbidities observed in patients with acne, eczema, psoriasis, or alopecia have been associated with the use of high-potency topical steroids (Hughes et al., 1983).

Study Limitations and Strengths

There are some limitations to our study. The psychiatric symptom screening tool was developed by the authors specifically for this research, based on clinical expertise and relevant literature. Although its content was reviewed by two experienced psychiatrists to enhance clinical relevance, no formal psychometric validation was conducted, nor was the tool piloted in a separate sample prior to implementation. In addition, psychiatric diagnoses were not confirmed through structured clinical interviews or standardized diagnostic scales, and the

data relied on patients' self-reports, which may have led to potential under- or over-reporting of psychiatric symptoms. Furthermore, the cross-sectional design of the study precludes any conclusions about causal relationships between dermatologic and psychiatric conditions. These factors may limit the reliability and generalizability of the findings. Future research using validated instruments and longitudinal designs is needed to further explore these associations and assess changes in psychiatric symptoms over time.

CONCLUSION

In summary, our study supports the fact that psychiatric symptoms are common in individuals with skin diseases and that referring these patients to psychiatric evaluation can positively contribute to the treatment process. Dermatologists may consider incorporating brief, validated screening tools into routine practice to help identify individuals at risk for psychiatric symptoms. Where such findings or clinical impressions suggest possible comorbidity, referral to mental health services may support more holistic and effective patient management. Further studies supported by more objective diagnostic methods will provide a better understanding of psychodermatological diseases.

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Conflict of Interest

The authors declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Author Contributions

Plan, design: IC; **Material, methods and data collection:** IC, MC, TA; **Data analysis and comments:** IC, MC; **Writing and corrections:** IC, MC, TA.

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